

Remarks

Claim Amendments

Claim 20 has been amended to incorporate matter from former claims 25, 35, 38, 41, and 69.

Claim 21 has been amended to incorporate matter deleted from claim 20.

Claims 20, 41, 48 and 50 have been amended to incorporate matter from dependent claims or from paragraph 21 of the application as published (page 7, lines 11-18 of the application as filed).

New claim 72 includes matter deleted from claim 50.

New claim 73 is supported by paragraph 44, page 5 of the application as published.

The other amendments made to the claims are apparent from the listing of claims. The Applicants submit that the claim amendments do not add any new matter.

Elections

The Applicants confirm their election to prosecute the claims of Group I, namely claims 20 to 45 and 48 to 71.

Claim Rejections

The Office Action rejected claims 20 to 38 and 43 to 45 as being anticipated by Brun et al., and claims 29 to 32 and 42 as obvious in light of Brun et al. The Office Action also rejected claims 39 to 41 and 48 to 71 as obvious given Brun et al. in view of Mailvaganam et al. The Applicants respectfully submit that the claims as amended are not anticipated or made obvious by these references.

With respect to claim 20, the Applicants have amended this claim to specify that the hollow support is made from 16 to 60 separate yarns, each yarn being 150 to 500 denier, and that the support has an outside diameter between 1.5 mm and 2.5 mm and a wall thickness greater than 0.2 mm. The applicant has also amended claim 20 to specify that the hollow support has at least 30 picks per inch.

Claim 48 has been amended to specify that each yarn is between 200 and 400 denier, and that 16 to 28 carriers are used, and that the support has an outside

diameter of between 1.5 mm and 2.5 mm and a wall thickness of more than 0.15 and less than 0.5 mm. Claim 48 has also been amended to specify that the support has at least 36 crosses per inch.

The Applicants respectfully submit that claims 20 and 48, as amended, are not anticipated by Brun et al. As conceded by the Office Action, Brun et al. do not disclose the number of picks to be used. Thus, Brun et al. do not disclose all the limitations of claim 20 or of claim 48.

The Applicants also respectfully submit that claims 20 and 48, as amended, are not obvious given Brun et al. in light of Mailvaganam et al.

The Office Action asserted that because Mailvaganam makes reference to the number of crosses per inch, it would have been obvious to use Mailvaganam in the teaching of Brun et al. to determine the number of picks per inch, since Brun et al. are silent. The Applicants submit that Brun being silent on the subject does not make it obvious to choose Mailvaganam as a source for the number of picks per inch. The Office Action has not established any motivation to apply the teaching of the number of crosses per inch in Mailvaganam to the teaching of Brun et al. The Applicants submit instead that there are reasons why a person skilled in the art would not combine the number of crosses per inch in Mailvaganam et al. to Brun.

Mailvaganam et al. specify at column 8, lines 15 to 17 that the tubular braid is to have "a foraminous circumferential outer surface interrupted by a multiplicity of overlapping yarns". Mailvaganam et al. further refer, at column 10, lines 33 to 37, to:

the circumferential outer surface 34 of the braid of woven yarn 31 which is rough and uneven because it is formed by the interwoven yarn which, in the range of thickness used and the number of picks in which it is woven, does not result in an even surface.

In contrast, Brun et al. specify at column 2, lines 20 to 21 that after heat treatment "the original loose texture becomes a tight and uniform texture" and at column 2, lines 30 to 33 that "unevennesses in the cross-section of the textile sheath are considerably reduced and quite frequently disappear completely." Brun et al. go on, at

column 2, lines 58 to 68, to describe a further calibration process designed to "flatten all the asperities i.e. surface unevennesses and roughnesses which may possibly be present on the surface of the textile sheath." Because Brun is primarily concerned with creating as smooth outer surface as possible, it would not be obvious to take the number of picks from Mailvaganam which is said to create a "rough and uneven" surface. In addition, the number of picks in Mailvaganam et al. is chosen, in part, to produce a desired size of void. Since Brun both heat treats, stretches and calibrates his sheath, whereas Mailvaganam does not, the number of picks in Mailvaganam would not obviously produce a desired void size when combined with the teaching of Brun.

The Office Action rejected claims 22 to 24 as anticipated, and claims 56 to 58 as obvious, on the basis that Brun et al. state that the length of the support could be adjusted. The Applicants respectfully submit that a mere suggestion that the length of the support could be adjusted does not constitute an anticipation of the specific lengths claimed. Brun et al. do no more than disclose that the rate of shrinkage can be adjusted relative to the elongation of the sheath at the outlet of the calibrator. Further, Brun goes on to teach (column 4, lines 17-25) that it is desirable for the amount of elongation to exceed the amount of shrinking so that the sheath becomes elongated, rather than shrunk. Accordingly, the Applicants respectfully submit that claims 22 to 24 and 56 to 58 are neither obvious nor anticipated.

The Office Action rejected claims 21 and 26 as anticipated, and rejected claims 55 and 60 as obvious, on the basis that extension at break would be inherent in the supports disclosed by Brun et al. because they are the same material and heat treated in the same way. The Applicants respectfully submit that the extension at break is not solely a function of the material of the support, but is also a function of the structure of the braided support, including the number of yarns and their denier, the braid pattern, and the number of picks per inch. The Applicants further submit that the disclosure of Brun et al. does not further provide information that is exact enough to identify the ranges claimed. For example, since Brun et. al. fail to disclose the number of picks per inch, it cannot be said that any of the examples would have an extension at break falling within the claimed

ranges. Further, the Office Action does not establish that the sheaths in Brun are shrunken under similar conditions as in the present invention. As discussed elsewhere in this response, the heat treatment in Brun is different in at least two respects, that it includes stretching while the sheath is hot and it involves calibration. Accordingly, the Applicants respectfully submit that claims 21, 26, 55 and 60 are neither obvious nor anticipated.

The Office Action asserts that claims 27 and 28 are anticipated, and that claim 53 is obvious, because the air permeability of the support is an inherent property. Once again, the Applicants note that Brun et al. do not provide information that is exact enough to identify the ranges claimed. As the Office Action indicates, air permeability is a function of, *inter alia*, the weave (which, it is submitted, includes the number of picks) and Brun et al. do not disclose the number of picks. Brun also has a different treatment process likely to alter the void sizes of the braid. It therefore cannot be said whether a braid made according to Brun et. al would have an air permeability in the claimed range. Accordingly, the Applicants respectfully submit that claims 27, 28 and 53 are not anticipated.

The Office Action states that claim 42 would be obvious in view of Brun et al., and that claim 51 would be obvious in view of Brun et al. and Mailvaganam et al. As the Office Action concedes, Brun et al. do not specify the weave pattern, and the Applicants submit that Mailvaganam et al. also fail to disclose the claimed weave patterns. The Applicants further submit that it would not have been obvious to select the claimed weave patterns, but would at most have been obvious to try. This, it is submitted, is not sufficient to establish obviousness. As stated by the United States District Court for the District of New Jersey in *Bristol-Myers Squibb Co. et al. v. Boehringer Ingelheim Corp. et al.* (2000), 86 F. Supp. 2d 433:

A finding, however, that the patented invention may have been "obvious to try" from the prior art will not invalidate it. Prior art that makes the invention only "obvious to try" rather than "obvious" gives either no indication of which parameters are critical or no direction as to which of many possible choices is likely to be successful.

As nothing in the cited references directs a reader to select the claimed braids, the applicant submits that they were no more than "obvious to try", if that, and are therefore not obvious. Accordingly, the Applicants submit that claims 42 and 51 are non-obvious.

The Office Action rejected claim 43 as anticipated by Brun et al. and rejected claim 52 as obvious in light of Brun et al. and Mailvaganam et al., because Brun et al. do not state that the ends are plied. The Office Action is, it is respectfully submitted, incorrect on this point. For instance, in Example 2 (column 5, lines 62 to 63) it is stated that the cotton yarns are "two ends twisted", i.e. plied. Furthermore, even if the Office Action were correct in asserting that Brun et al. did not state that the ends were plied, the Applicants submit that mere silence with respect to a feature cannot be construed as a disclosure of that feature. Accordingly, claims 43 and 52 are not anticipated. Furthermore, the Applicants respectfully submit that claims 43 and 52 are not obvious, as there is nothing in Brun et al. or Mailvaganam et al. to suggest that the ends should not be plied.

The Office Action states that claim 54 would be obvious in light of Brun et al. and Mailvaganam et al. because Brun et al. disclose heat treatment of a tubular support. As was stated above, Brun shrinks but then elongates the sheaths. Brun does not specify that the net result of this is a sheath with a stable pre-shrunk length. In contrast, Brun states at column 4, lines 17-27, that a pre-stressed, elongated sheath possesses desirable features. However, such a sheath has neither a stable length nor a pre-shrunk length.

Claim 73 states that the support has a rough and uneven surface. In contrast, the sheath in Brun is calibrated to provide a smooth, even surface.

The various dependent claims provide additional combinations of features which, at least because they include the features of one or more claims discussed above, are also novel and non-obvious.

In light of the above, the Applicants respectfully submit that the application
is in condition for allowance.

Respectfully submitted,

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